

# PHYSICAL TRAINING

## TREATED TROW AMERICAN AND TUROREAN POINTS OF VIEW

By DR. E. M. HARTWILL.

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## PHYSICAL TRAINING.

The Sun has done me the compliment to ask for some account of my journeying and studies during my stay in Europe, from the middle of May, 1888, until the end of August, 1889. But it seems to me that I can better serve the cause of physical training, in which the public is beginning to take a livelier and more intelligent interest than hitherto, by foregoing any attempt to give an itinerary or description of my travels and observations, however interesting and instructive they were to myself, and by attempting to set forth, in as impersonal a way as possible, some of the conclusions at which I have arrived as the result of my personal study of gymnasia, play-grounds, public and military schools, and orthopædic institutes in America, as well as in England, Germany, Switzerland, Russia, and Sweden, and to note some of the problems with regard to physical training which are occupying or seem likely soon to occupy the attention of educators in Baltimore, as well as in other parts of the country.

As I shall not cumber what I have to say with references to authorities, or with my reasons for what may appear to be unsupported and arbitrary opinions, it seems proper for me to state that, before I was enabled to devote some months to the study of athletics and gymnastics in England

d Germany, in 1885, I had had occasion to visit all the wincipal college and other gymnasia in this country, and to familiarize myself, so far as I could, with all that had been written or attempted in the United States in the domain of physical training.

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#### THE BOSTON CONFERENCE.

The most recent and convincing evidence that public attention is becoming awakened and instructed in matters pertaining to physical training is afforded by the Conference on Physical Training held in Boston on the last two days of the Thanksgiving recess. It was, as the special despatches to the Sun have already shown to its readers, a notable occasion. But it was something more. It was the most important meeting of the kind ever held in this country. Dr. W. T. Harris, the United States Commissioner of Education, presided over its deliberations. The call for it was signed by John W. Dickinson, Secretary of the Massachusetts Board of Education; E. P. Seaver, Superintendent of the Boston public schools; Francis A. Walker, President of the Massachusetts Institute of Technology; and by the presidents of Boston University, Colby University, Maine, and Wellesley College, as well as by many members of the Boston school committee and a large number of physicians and others who are prominent in educational circles in that city. Although the Massachusetts Teachers' Association was in session in the city at the same time, the audience at each of the four sessions of the conference numbered from fifteen hundred to two thousand persons. The major part of the audience consisted, doubtless, of Boston and Massachusetts normal and public school teachers: but New York, Baltimore, Brooklyn, and Washington, and other cities also, were represented. So, too, were Harvard, Vale, and Johns Hopkins Universities, and Amherst, Haverford, and Bowdoin Colleges for men, and Vassar, Smith, Wellesley, Bryn Mawr, and the Woman's College of Baltimore for women.

### THE PAPERS AND DISCUSSIONS.

The programme, which embraced papers, discussions, and illustrative class exercises in gymnastics, was a varied and interesting one, and served not only to set forth the general nature and effects of muscular exercise, the salient princi-

ples and characteristic methods of the German and Swedish and so-called "American" systems of school gymnastics, but also to call attention in a most striking way to the great progress made within recent years in the construction and management of college gymnasia, and to the rapid and successful spread of gymnastic training in the public schools of many of our Western towns and cities. The Earl of Meath, who is a member of the newly organized London council, spoke of the good results of the recent introduction of Swedish gymnastics into the board schools of London; and Baron de Coubertin, sent by the French government to this country to study our school and college athletics and gymnastics, read a paper upon recent efforts to transplant English out-of-door sports into French schools for boys.

#### ONE PRACTICAL RESULT.

The immediate practical result of the conference was the appointment of a commission to consider and report on the best means of providing for the physical training of school children. Inasmuch as the papers presented and the fully reported discussion will be published for wide distribution, the conference is likely to have more than a transitory influence, and to stimulate discussion, not to say controversy. Even before the conference took place, the partisans of various systems of teaching gymnastics were engaged in lively skirmishing in the Boston newspapers; but, both at and before the conference, all seemed unanimous in the opinion that physical training of some sort is urgently needed in school and college. This is most encouraging, as it shows that the athletic revival, which had its beginnings at the close of the war, and the work done by the colleges within the last ten years in promoting athletics and gymnastics, have begun to bear fruit. The conference, therefore, makes the beginning of a new phase in the attitude of educators toward physical training; namely, a phase in which the desire and purpose to learn and apply the best methods of teaching children and youth how to make the most of their physical powers takes the place of indifference to, or at the best of a qualified approval of, bodily education, and vague and unintelligent exhortations as to its pursuit. The main lesson of the conference, whether for Boston, New York, or Baltimore, is this,—that physical training is better understood, more generally and thoroughly organized, and more intelligently and successfully carried out in almost all European countries than is the case in any city or college in America, and is, therefore, worthy of our close and careful study.

#### NO AMERICAN SYSTEM.

There have been several sporadic and spasmodic attempts in this country, within the last fifty years, to develop schemes for the systematic bodily training of school children and college youth. But not only does no one of them deserve to be dignified by the high-sounding title of "the American system," but it can be shown that the best considered and successful of such attempts have been more or less carefully modelled on European systems,—notably the German. Prior to 1825, physical training in its proper sense had no recognition or standing in the curriculum of any school or college,—if we except the United States Military Academy at West Point and a very few institutions modelled on it. The germ of such physical training as now exists in many of our colleges came from abroad, and was planted by German exiles in New England soil.

#### THE ROUND HILL SCHOOL.

The Round Hill School, at Northampton, Mass., was the first institution in the country to make gymnastic exercise a part of the regular course of instruction. This was in 1825, when the Round Hill Gymnasium was erected under the supervision of Dr. Beck, who had been the friend and pupil of Jahn, the "Father of German Gymnastics." In New England, between 1825 and 1830, most of the colleges and many schools and academies imitated Round Hill, and

established out-of-door gymnasia. But the interest was unintelligent, competent teachers were few or none, and the movement soon spent its force. There appears to have been no well-considered and sustained attempt by the authorities of any American college or of any set of public schools to provide their pupils either with instruction in gymnastics or adequate facilities for athletic sports during the period extending between 1830 and 1860.

#### BEFORE AND AFTER THE WAR.

Just before and just after the outbreak of the war of 1861, a great interest sprang up, especially among college students, in regard to gymnastics, feats of strength, and athletic sports. The writings and teachings of Dr. Winship, the champion of heavy lifting, of "Tom Brown," and of Dr. Dio Lewis, contributed to stimulate and strengthen this interest. which may be termed the Lewis or light gymnastic movement, was instrumental in causing the erection of a considerable number of school and college gymnasia, and the inauguration of a few poorly endowed and rudely organized departments of physical culture; but the movement was short-lived, and schemes for physical training assumed a semimilitary character. It should, however, be said in passing that Amherst College, in Massachusetts, ever since 1860 has required class exercises in light gymnastics of all its ablebodied students, and that military drill for all but the voungest boys has constituted a part of the teaching of the boys in the high schools of Boston since 1863.

#### A LESSON OF THE WAR.

The worth of a good physique and the educational value of a physical training were most clearly demonstrated and sharply emphasized by the lessons of the late war. The unexampled interest and activity in athletic sports developed since the close of the war have contributed most materially toward the promotion and appreciation of physical training.

College athletics, with their concomitant intercollegiate contests, have assumed such magnitude that it is quite the fashion to speak of many colleges as if they were schools for forming ball-players, oarsmen, and athletes. There would be more point to such satire if the interest in athletics, which seems to deepen and strengthen year by year, were confined to the student class instead of pervading the community as a whole. Exhibitions and contests of every description, which would not have been licensed or tolerated, much less pecuniarily supported, twenty or thirty years ago, now yield quick and large returns in popularity and cash to their promoters.

### HARVARD'S PHYSICAL DEPARTMENT.

Next to the athletic revival, the cause of physical education in America has received its greatest impetus, in recent years at least, from the organization by Harvard University, in 1879, of a new department of physical training in connection with the Hemenway Gymnasium, for whose direction and equipment Mr. Augustus Hemenway, of Boston, and a graduate of Harvard in 1876, gave the sum of \$115,000. To Dr. D. A. Sargent, the director of the Hemenway Gymnasium since its opening ten years ago, we owe the invention of the so-called Sargent system of developing gymnastics. Sargent system, which in its original or modified forms has been adopted in most of the college and Y. M. C. A. gymnasia of the country, is the most original contribution that America has made to the cause of physical training. Sargent gymnastic machines, numbering nearly sixty, employ the so-called "pulley-weights" in variously modified combinations, so as to call certain groups of muscles into action, while little or no muscular exertion is called for in the rest of the body. By the use of these machines one can exercise his back, loins, thigh, forearm, arm or hand muscles, according as his own taste or the opinion and advice of his instructor may dictate. The director of every gymnasium. where the Sargent system is in vogue, habitually makes a careful physical examination, in which are included tests of

strength of back, legs, arms, and hand, and some forty items of measurement as to length, girth, etc., of different parts of the body. The measurements of each individual examined are compared with what is considered the standard for persons of his age, and exercise on such machines as will tend to remedy his defects and promote symmetrical growth and harmonious development is prescribed. The Sargent gymnastics are medical or dietetic rather than strictly educative in their aims and results, since individual lacks and needs are most considered; and none of the Sargent machines, with the sole exception of the "chest weight," can be used for class purposes. Dr. Sargent's idea of scientifically directing and controlling gymnastics and athletic work is thoroughly admirable and practical; but the effect of using the Sargent apparatus stops short of muscular development in its higher sense, since by means of "pulley weights" it is possible only to enlarge and strengthen the muscles, without teaching skill and discrimination to the nerve centres with which the muscles are connected and by which they are animated and controlled. The Sargent machines, then, fail to provide a complete system of physical training. Their use promotes the healthy nutrition of muscles, nerves, and brain, but does not tend to develop sleight or skill except in a rudimentary way.

In the ten years that have elapsed since the completion of the Hemenway Gymnasium, more than a half million dollars have been spent in building and furnishing college and school gymnasia; and it is safe to say that in seven-tenths of all the gymnasia of the country one would find larger or smaller collections of the Sargent developing appliances. Some hundreds of thousands of dollars have also been expended in the purchase and improvement of play-grounds and athletic fields for the use of students in school and college. Vale, Cornell, Bowdoin, Haverford, Lafayette, Lehigh, the Johns Hopkins, Vanderbilt, the University of Pennsylvania and Gettysburg College, among institutions for men, and Vassar, Bryn Mawr, and the Woman's College of Balti-

more, among institutions for women, have followed the example set by Amherst College in 1860, and reset by Harvard in 1879, by choosing physicians as directors of their gymnasia.

#### A NUMBER OF ELABORATE BUILDINGS.

The Hemenway Gymnasium is still the finest building in the country, devoted solely to gymnastic purposes. buildings of the New York Athletic Club, the Boston Athletic Club, and those of the athletic clubs of San Francisco and New Orleans are all elaborate and costly structures, in which are combined the feature of an ordinary club house, together with gymnasia, bowling alleys, shooting galleries, and Turkish baths. Of these, the building of the New York Athletic Club, erected at an expense of \$250,000, is the costliest. The Central Turnverein of New York has recently completed a building whose cost, including the lot upon which it stands, is in the neighborhood of \$800,000. club features of the latter, which are of a distinctly German character, differ somewhat from those of the above-mentioned Besides a swimming pool, bowling and athletic clubs. shooting galleries, a magnificent hall and stage, and a fine gymnasium, the building of the Central Turnverein includes a number of spacious and well-lighted rooms, which will be devoted to manual training and ordinary school purposes.

#### ENCOURAGE THE TEACHERS.

Yet in spite of all that has been expended on grounds, building, and apparatus since 1879, the vast majority of our school and college gymnasia are but rudely organized, and have accomplished very little in the way of training those who frequent them. We Americans are enamoured of fine buildings and costly fittings and furniture, but have hitherto wofully failed to organize and maintain anything like an adequate force of teachers and trainers in the field of bodily education. Where scores of thousands of dollars are lavished upon buildings and apparatus by donors and trustees,

you will find the appropriations devoted to the purposes of instruction measured by beggarly hundreds. In Germany, Switzerland, Norway, and Sweden, vastly better results are attained, often with appliances and conveniences that would provoke our scorn, by reason of the fact that brains are more highly considered in those countries than brick and mortar and machinery. Systematic instruction by competent teachers is considered of prime importance, and is paid for accordingly. The results more than justify the outlay.

#### THE GERMAN PLAN.

It would be interesting, did space permit, to trace the development of physical training in Germany and Sweden. the countries where it is most general and most highly organized; but a general statement, by way of explanation and comparison, must here suffice. German gymnastics embrace three well-marked fields or departments; namely, popular gymnastics, school gymnastics, and military gymnastics. The organization of the last two departments is maintained and regulated by the government for strictly educational purposes, whereas the Turnvereine, as the gymnastic societies are called, are voluntary associations of a social and semieducational, but wholly popular and patriotic nature. In each department, one finds a system of carefully selected exercises in use. These exercises, which consist of free movements, without apparatus, and class exercises, in which both light and heavy apparatus are employed, are arranged in a progressive series, so that they may be adapted to meet the special needs, physical and mental, of the younger boys and girls, and of the raw recruit and old soldier, respectively. In school and army, the instruction is committed to carefully trained and specially licensed teachers only. The Military Gymnastic Institute in Berlin dates from 1851, and is devoted to the gymnastic training of army officers, in order that they may be able to give intelligent instruction to their men. The classes in this institute number about two hundred vearly.

#### FOR THE INSTRUCTION OF TEACHERS.

The Royal Prussian Institute for Training Teachers of Gymnastics is also in Berlin, and dates from 1851. Its function is to train teachers of gymnastics for the schools. It holds two courses annually, one for men and one for Similar training-schools exist in Dresden, Munich, Stuttgart, and Carlsruhe. Gymnastic training was first introduced into the Prussian higher schools for boys in 1842. In 1860, it was ordered to be introduced into the elementary schools for boys; and in 1862 attendance upon such instruction was made obligatory in all boys' schools. In recent years, gymnastics have become quite general in girls' schools of all grades. Attendance upon gymnastic instruction is exacted from all unexcused pupils for two hours weekly in all schools for boys, and also in some cities in all schools for girls. As a rule, each school has its own gymnasium and play-ground, furnished with appropriate apparatus. In the primary schools, the instruction is given by the ordinary class teachers; while in the higher schools special teachers of gymnastics are usually employed. In 1882, only ten per cent, of the pupils in the higher schools for boys in Prussia were excused from gymnastics; and they were excused on the certificates of physicians that the exercise would be prejudicial to their health. Only eighteen per cent. of this class of schools were obliged to discontinue gymnastics in winter through having no proper gymnasium, while sixty per cent. of them possessed gymnasia of their own. In parts of Germany, as well as in Sweden, gymnastics are also taught in asylums for the blind, the deaf and dumb, and the insane. In Berlin, more than one hundred gymnasia are maintained for educational purposes. In 1880-81, the city paid nearly \$50,000 for the instruction given its school children in gymnastics, which sum equalled about one-twenty-third of its total expenditures for schools in that year. The City Gymnasium in Berlin was built by the city in 1864, at a total cost of \$92.750. Its main hall is 150 feet long, 75 feet wide, and

48 feet high, and easily accommodates 400 gymnasts at a time. In all, something over 13,000 persons exercise here weekly. The annual appropriation for its maintenance, exclusive of salaries, is between \$2,500 and \$3,000.

#### THE DEUTSCHE TURNERSCHAFT.

The Turnvereine, in Germany and Austria, are organized as the Deutsche Turnerschaft. On Jan. 1, 1889, the Turnerschaft comprised 4,305 clubs, with an aggregate membership of 366,915 persons over fourteen years of age, of whom more than 189,000 were active gymnasts, and 18,643 were classed as "fore-turners," or "expert gymnasts" fit to teach the younger members. The number of pupils taught gymnastics, in gymnasia of the Turnerschaft, was nearly 50,000, an increase of more than 7 per cent. over the year before. It is almost as common to find Turnvereine among Germans in foreign lands as to find cricket and tennis clubs among British colonists. Turnvereine flourish in this country, Brazil, Chili, and Australia, as well as in every country in Europe. Switzerland, Belgium, and Austria have organized systems of school gymnastics which are very similar to the German; and France is endeavoring to introduce such a system.

#### NORWAY AND SWEDEN.

In Norway and Sweden, popular gymnastics are less common than in Germany; but school and military gymnastics have long been fully organized, and are obligatory. The teachers of school gymnastics in Sweden are as a class superior to those in Germany, being more thoroughly trained for their business. Accordingly, the effects of gymnastic training in the schools are more clearly discernible in the grace, vigor, and erectness of the Swedish children. The Royal Central Gymnastic Institute, in Stockholm, founded in 1813, is the best in the world for training teachers of gymnastics. Its graduates are also fitted to practise the Swedish medical gymnastics. Since the Swedes are not

only less prominent in European affairs, but also because they are less enterprising and aggressive, the Swedish system of school gymnastics has not gained such wide recognition as the German. On some accounts, the Swedish school gymnastics seem to me to be, perhaps, better adapted than the German for the bodily education of the younger classes; and I should say that a Swedish gymnasium would cost somewhat less than a similar building in Germany. In England, the Swedish gymnastics are now taught in the board schools of London, Leeds, and Bristol, and in a large number of British schools and colleges for girls.

#### SWEDISH SYSTEM IN AMERICA.

Within a year, Swedish school gymnastics have attracted considerable attention in this country, owing to the generosity and public spirit of Mrs. Hemenway, of Boston, whose son, by the way, gave the Hemenway Gymnasium to Harvard. Mrs. Hemenway, having secured the services of a thoroughly trained Swedish teacher, has classes of 200 teachers selected from the Boston public schools, under thorough-going instruction in Swedish gymnastics. Mrs. Hemenway generously bears the expense of training these classes, and has also provided means for the experimental training in gymnastics of the pupils in the Girls' Normal School of Boston. The results of these Boston experiments cannot fail to be interesting and instructive.

#### MEDICAL GYMNASTICS.

The most interesting and valuable branch of Swedish gymnastics—namely, the medical gymnastics, sometimes called the Swedish movement treatment—is very little understood or appreciated in this country or in England, though it has gained wide recognition not only in Scandinavia, but also in Germany. Dr. Zander, of Stockholm, has invented a series of some sixty different machines, whereby it is possible to reproduce most of the movements employed by the

Swedish medical gymnasts in the treatment of various deformities and chronic ailments. The original Zander Medico-Mechanical Institute has been in successful operation for more than twenty years, in Stockholm, under the direction of its founder, who is a scientific physician of high standing. Zander institutes are also to be found in the principal cities of Norway and Sweden and Finland, and in St. Petersburg and London besides. In Germany their number has increased rapidly since 1884, when the first of the kind was established by the government of the Grand Duchy of Baden, under Dr. Heiligenthal, the director of the "Grand Ducal Frederick's Bath" in Baden-Baden. Zander institutes now exist in Berlin, Hamburg, Carlsruhe, Breslau, Wiesbaden, Dresden, and Frankfort-on-the-Main. The only complete set of the Zander machines in America belongs to Dr. Oberg's Institute, in Buenos Ayres. It is to be hoped that the projected Zander Institute in New York City will be so organized as to commend the Zander gymnastics to the critical and favorable notice of American physicians and surgeons. The Woman's College of Baltimore, on St. Paul Street, has fitted its gymnasiuum with Swedish apparatus, including a set of the Zander machines for "active movements." These, though better adapted than the Sargent machines for the purposes of purely developing evercises, are, on account of their costliness, not likely to be generally adopted in American gymnasia. At present, the Woman's College gymnasium is the only one in the country that possesses even a partial set of the Zander muchines. a full set of which includes machines for strictly "medical movements," and requires steam or water power to run them.

Of the country as a whole, it may be sail that colleges of the East make ampler and wiser provisions for the physical training of their students than do similar institutions of the West and South, and that more is done for the physical training of children in public and private schools in the West than in any other section of the country. Baltimore, like most of our Eastern cities, has done little or nothing to

the bodily education of its school children. German gymnastics, both for boys and girls, are well taught by Director Schulz, of the Young Men's Christian Association Gymnasium, who is an accomplished teacher, and a graduate of the Normal School of the N. A. Turnerbund; but thoroughgoing, genuine physical training is not to be found in most of our private schools, whether for boys or girls. The best equipped and organized gymnasium for girls and women in the entire country, so far as I can learn, is the previouslymentioned gymnasium of the Woman's College. Dr. Alice T. Hall, its directress, has studied the Swedish and German systems in Stockholm and Berlin; and Miss Wallin, her assistant, is both an experienced teacher and a graduate of the Royal Central Gymnastic Institute in Stockholm. venture to predict a brilliant future for the Woman's College Gymnasium, and for that of the New Bryn Mawr School for Girls as well, whose directress, Dr. Hurd, is now in Stockholm, studying Swedish methods and results.

### THE JOHNS HOPKINS GYMNASIUM.

The Johns Hopkins gymnasium is too small to admit of being fully fitted and furnished after the latest and best approved methods. Its organization has been measurably improved since its establishment: and class instruction in Swedish and German gymnastics is now offered to all university students, the undergraduates being required to avail themselves of such instruction. Next to a well-considered and practical system of gymnastics for her schools, the greatest present need of Baltimore, in the matter of physical training, now that she may be said to lead the country as to a gymnasium for women, seems to me to be a commodious and well-equipped modern gymnasium for the promotion of recreation, health, and bodily training among boys and young men of the "neglected upper class."

#### THE PUBLIC SCHOOLS.

As has been stated already, physical training has been given a place in the public schools, in many of our Western eities. This has been chiefly owing to the efforts and example of the North American Turnerbund. The Turnerbund or Gymnastic Association owes its existence to the foundation of Turnvereine by the political refugees who came to this country from Germany in 1848. The last report of the Turnerbund shows that it had a total membership on April 1, 1889, of 31,869. Its property free from debt was valued at \$2,390,000, including 160 gymnasia and libraries aggregating 53,000 volumes. In the gymnastic schools maintained by the Bund, the number of pupils was nearly 22,000, of which 6,055 were girls. The Bund's corps of gymnastic teachers number 140, most of whom were trained as teachers in the normal school of the Bund, which has graduated some 250 teachers in the last twenty-five years. I need hardly say that there is no other body of teachers in the country who can be compared for efficiency with these of the Turnerbund. The instruction given in the gymnastic schools is not confined to gymnastics. The New York Turnverein, for instance, has nearly 1,000 boys and girls in its classes. They receive two lessons of an hour each in gymnastics weekly, two in German, one in singing, one in drawing, and the girls have one hour's instruction in sewing, knitting, etc. Ninety of the boys are organized as a betralion for military drill. They drill once a week, and practise target-shooting as well as marching and the manual of arms. Fencing is generally taught in the Vereine.

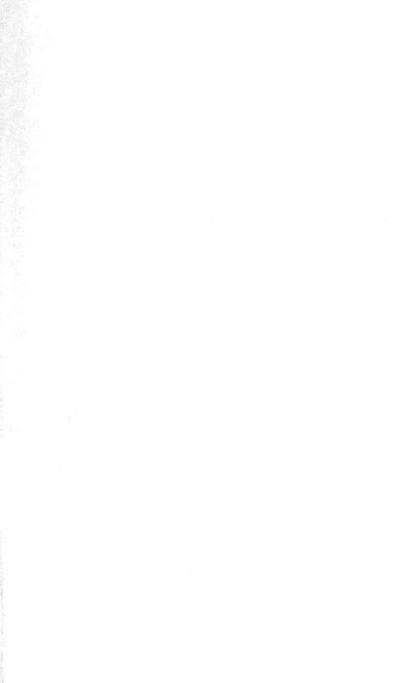
#### WHAL WESTERS THE HAVE ST

In October, 1885, light gymnastics were made obligatory throughout all grades of the public schools of Kansas City. Chicago scon followed the example set by Kansas City. In Chicago, 14 special teachers, trained as colling to the

methods of the Turnerbund, give instruction in the high and grammar schools and oversee the insruction given by the teachers of the primary school to their own classes. The salaries paid to the Chicago teachers of gymnastics range from \$750 to \$1,800 a year. In Omaha, Neb., St. Joseph, Mo., Canton, Ohio, Denver, Col., and Louisville, Ky., the Chicago plan of having special teachers has been adopted. While the Kansas City plan of having a director of physical training, through whose instruction the teachers in schools are enabled to give gymnastic instruction to their classes, has been followed in Milwaukee, Wis., Cleveland, Ohio, Pittsburg and McKeesport, Pa., Davenport and Keokuk, Ia., Rock Island and Cairo, Ill., and a long list of smaller towns in Kansas, Iowa, Missouri, and Indiana. German gymnastics, according to one or the other of the above-mentioned plans, are now taught in the schools of towns and cities in the West whose school population amounts to nearly 400,000. This is a showing which the school boards and teachers of the East cannot afford to ignore or affect to minimize.

#### A COMING PROBLEM.

The time is coming, is possibly near at hand, when our educational authorities will be confronted by the same problems regarding the place and value of physical training, in its various branches, with which European educators have been so long engaged, and have done so much to solve. I am far from thinking that such problems can be satisfactorily solved by the attempted introduction of any unmodified foreign system of gymnastics or athletics. But I am firmly convinced that whoever may be impelled or compelled to provide a remedy for the present lack of genuine physical training in American schools and colleges can readily save time, money, and trouble if they will only study the German and Swedish systems of school gymnastics.



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